

WHAT IS CLAIMED IS:

1. A polishing composition for memory hard disk comprising water and silica particles, wherein the silica particles have a particle size distribution in which a relationship of a particle size (R) and a cumulative volume frequency (V) in a graph of particle size-cumulative volume frequency obtained by plotting a cumulative volume frequency (%) of the silica particles counted from a small particle size side against a particle size (nm) of the silica particles in a range of particle sizes of from 40 to 100 nm satisfy the following formula (1):

$$V \geq 0.5 \times R + 40 \quad (1)$$

wherein the particle size is determined by observation with a transmission electron microscope (TEM).

2. The polishing composition according to claim 1, wherein the silica particles are colloidal silica particles.

3. The polishing composition according to claim 1, further comprising at least one member selected from the group consisting of acids, salts thereof and oxidizing agents.

4. The polishing composition according to claim 2, further comprising at least one member selected from the group consisting of acids, salts thereof and oxidizing agents.

5. The polishing composition according to claim 1, wherein pH is from 1 to

4.5.

6. The polishing composition according to claim 2, wherein pH is from 1 to 4.5.

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7. The polishing composition according to claim 3, wherein pH is from 1 to 4.5.

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8. The polishing composition according to claim 4, wherein pH is from 1 to 4.5.

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9. A process for reducing surface roughness (TMS-Ra) of a substrate for memory hard disk comprising the step of polishing a substrate for memory hard disk with the polishing composition of claim 1.

10. A process for reducing surface roughness (TMS-Ra) of a substrate for memory hard disk comprising the step of polishing a substrate for memory hard disk with the polishing composition of claim 2.

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11. A process for reducing surface roughness (TMS-Ra) of a substrate for memory hard disk comprising the step of polishing a substrate for memory hard disk with the polishing composition of claim 3.

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12. A process for reducing surface roughness (TMS-Ra) of a substrate for memory hard disk comprising the step of polishing a substrate for memory hard

disk with the polishing composition of claim 4.

13. A process for reducing surface roughness (TMS-Ra) of a substrate for memory hard disk comprising the step of polishing a substrate for memory hard disk with the polishing composition of claim 5.

14. A process for reducing surface roughness (TMS-Ra) of a substrate for memory hard disk comprising the step of polishing a substrate for memory hard disk with the polishing composition of claim 6.

15. A method for manufacturing an Ni-P plated substrate for memory hard disk, comprising the step of polishing an Ni-P plated substrate for memory hard disk with the polishing composition of claim 1.

16. A method for manufacturing an Ni-P plated substrate for memory hard disk, comprising the step of polishing an Ni-P plated substrate for memory hard disk with the polishing composition of claim 2.

17. A method for manufacturing an Ni-P plated substrate for memory hard disk, comprising the step of polishing an Ni-P plated substrate for memory hard disk with the polishing composition of claim 3.

18. A method for manufacturing an Ni-P plated substrate for memory hard disk, comprising the step of polishing an Ni-P plated substrate for memory hard disk with the polishing composition of claim 4.

19. A method for manufacturing an Ni-P plated substrate for memory hard disk, comprising the step of polishing an Ni-P plated substrate for memory hard disk with the polishing composition of claim 5.

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20. A method for manufacturing an Ni-P plated substrate for memory hard disk, comprising the step of polishing an Ni-P plated substrate for memory hard disk with the polishing composition of claim 6.